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(PATENT)

REMARKS

Reconsideration and Allowance are respectfully requested in view of the foregoing amendments and the following remarks.

Claims 1-10 and 34-37 are pending in this Application.

Claims 1, 5, 6 and 34-37 have been amended.

Regarding the Claim Objections

Claim 5 was objected to under 37 CFR 1.75(c) for having improper dependent form and for failing to further limit the subject matter of the previous claim.

Applicant has carefully reviewed Claim 5 and notes that it is properly dependent upon Claim 1. Furthermore, Claim 5 further limits the subject matter of Claim 1 by stating "said ECC encoder applies an error correction code in converting said scrambled groups of data in said ECC-encoding data." It is understood that an ECC device may perform its error correction code method using various hardware and software related techniques, which involve the use or non-use of polynomials or codes. As such, Applicant respectfully requests that the objection to Claim 5 be withdrawn because claim 5 is properly dependant on Claim 1 and because Claim 5 further limits the subject matter of Claim 1.

Claim 4 was objected to because it is thought to substantially recite elements that are already in Claim 1. Applicant respectfully points out that Claim 4 is dependent upon Claim 3 and narrows the scope of the frame-recoverer, which is not recited in Claim 1. As such, Applicant respectfully requests that the claim objection to Claim 4 be withdrawn.

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Regarding the § 112 Rejection

Claims 5 and 34-37 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention.

With respect to Claim 5, Applicant has amended Claim 5 to correct the insufficient antecedent basis that was pointed out by the Examiner. Applicant respectfully requests that the §112 rejection be withdrawn.

With respect to Claims 34-37, Applicant understands the confusion that the Examiner encountered in determining the meaning of the claims. As such, Applicant has amended Claims 34-37 to recite generally that the data bit stream being received is substantially only source encoded. As such, Applicant respectfully believes that these claims are now definite and particularly point out and distinctly claim the subject matter that the Applicant regards as the invention. Applicant respectfully appreciates the Examiner's careful review of these claims and proper assumption that the received bit stream is at least source encoded.

Regarding the § 101 Rejection

Claims 34-37 were rejected under 35 U.S.C. §101 because it was believed the claims lack patentable utility. Applicant has amended Claims 34-37 to make clear that the received bit stream is substantially data source encoded or resulting from data source encoding. As such, Applicant respectfully requests that this §101 rejection be withdrawn and submits that these claims are ready for allowance.

Regarding the § 102 Rejection

Claims 1, 5, 34, 35 and 37 were rejected under 35 U.S.C. §102(b) for being anticipated by *Kumar* (U.S. Patent Number 5,825,807). Applicant would agree that *Kumar* teaches a

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scrambler device that receives a bit stream (scrambler 102 in Fig. 9 of *Kumar*). The *Kumar* scrambler device does not scramble groups of data in the data bit stream into groups of scrambled data, but instead only teaches scrambling the stream of data in the data bit stream. This is made clear by reading *Kumar* with respect to Fig. 9, which is a block diagram of the transmitter system according to one of *Kumar*'s embodiments. Note that *Kumar* discusses Fig. 9 by referring back to Fig. 1 on various occasions. See Column 20, Lines 24-52. Referring back to Fig. 1 and the related discussion of Fig. 1 in *Kumar*, we find that the source bit information (message) 1 is randomized by scrambler 2, which multiplies the binary message 1 by a scrambling polynomial. Column 6, Lines 55-64. After the scrambling function is performed 2 then "redundancy is added to the scrambled source message by error correction code (ECC) encoder 3." *Kumar* Column 7, Lines 12-15. *Kumar* does not teach, allude to, or anticipate using the scrambler 2 to scramble the data bit stream into groups of data. In fact, *Kumar* does not teach, anticipate, or suggest dividing the data stream into groups until after the ECC encoding. The error encoded message is reordered by interleaver 4 after the error encoded message is interleaved, only then is the data divided into groups. At Column 7 beginning at Line 57, *Kumar* states, "the encoded and interleaved message is divided into groups of bits, which are to be simultaneously transmitted in a single information symbol or baud, by serial-to-parallel converter 5." As such, *Kumar* specifically requires that the data stream not be divided into groups until after it is encoded, interleaved and transmitted by the serial-to-parallel converter.

With respect to Independent Claim 1, this claim recites, among other things, that "the scrambler device scrambles the data bit stream on a group-wise basis to produce scrambled groups of data." With respect to Claim 34, this claim recites, among other things, "a scrambler device programed to convert, on a group-wise basis, a received bit stream into groups of K scrambled data bits." Claim 35 recites, among other things, "the scrambler device scrambles the

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data bit stream on a group-wise basis into scrambled groups of data." And, Claim 37 recites, among other things, "a scrambler device programed to convert, on a group-wise basis, a source encoded data bit stream into grouped scrambled data." As such, Applicant respectfully points out that *Kumar* does not teach or anticipate Claims 1, 34, 35 and 37. Applicant respectfully requests that the §102 rejection be withdrawn and submits that these claims are ready for allowance.

Claim 5 is dependent upon Claim 1 and is therefore not anticipated for at least the same reasons as discussed above with respect to Claim 1.

Claims 6-8 were rejected under 35 U.S.C. §102(e) for being anticipated by *Adam* (U.S. Patent Number 6,628,725).

Claim 6 has been amended to recite, among other things, "receiving the data bit stream, from an originating source, at a scrambler device, said data bit stream comprising data bits and other bits." Claim 6 continues by reciting, "converting, on a group-wise basis, said data bit stream into groups of scrambled data, by said scrambler device, prior to performing another data function on said data bit stream."

Adam, in Fig. 1, teaches a data stream 102 being provided to an encoder 104. The encoder 104 is shown in Fig. 2 as having a plurality of elements being 202, 204, 206, and 208. The encoder of *Adam*, in Fig. 2, reads the next six characters from the data stream at step 202; then at step 204, the encoder performs control character encoding and byte reordering. See *Adam* Column 3, Lines 44-50. It is not until after step 204 that *Adam* scrambles the data at step 206. *Adam* clearly teaches and performs a data encoding function prior to scrambling the received data from step 202.

Claim 6 recites, among other things, "converting, on a group-wise basis, said data bit stream into groups of scrambled data, by said scrambler device, prior to performing another data

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function on said data bit stream." Applicant respectfully submits that because *Adam* encodes the data at step 204 prior to scrambling the data at step 206, then *Adam* does not anticipate or teach Claim 6. Furthermore in Fig. 3 of *Adam*, it is noted that it is between steps 302 and 304 where code character encoding is performed. Code character encoding is not considered scrambling. Between steps 304 and 306 of Fig. 3 is where the scrambling occurs in *Adam*. Applicant further submits that *Adam* does not anticipate or teach converting "said data bit stream into groups of scrambled data, by said scrambler device, prior to performing another data function on said data bit stream." As such, Applicant respectfully requests that the §102 rejection be withdrawn and submits that Claim 6 is allowable.

With respect to Claims 7 and 8, these claims are either directly or indirectly dependent upon Claim 6 and are therefore not anticipated for similar reasons as discussed above with respect to Claim 6.

Regarding the § 103 Rejection

Claims 2 and 36 were rejected under 35 U.S.C. §103(a) for being rendered obvious by *Kumar* in view of *Adam*. Claim 2 is dependent upon Claim 1 and is similarly distinguishable over *Kumar* in view of *Adam* by, at least, the virtue of its dependency from the patently distinct base Claim 1.

Claim 36 has been amended to recite, among other things, "receiving a data bit stream at a scrambler device, said data bit stream comprising data bits and other bits resulting from data source encoding." Claim 36 further recites "converting, on a group-wise basis, said data bit stream into groups of scrambled data, by said scrambler device, prior to performing another data function on said data bit stream." For the reasons discussed above with respect to the inadequacies of *Kumar* and *Adam*, Applicant respectfully submits that Claim 36 is not taught,

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rendered obvious, or alluded to by the recited combination of references. Applicant respectfully requests that the §103 rejection be withdrawn and submits that Claim 36 is ready for allowance.

Applicant further submits that the remaining claims are each similarly distinguishable over the prior art of record, at least, by the virtue of each claim's ultimate dependency from a patently distinct base claim.

Applicant respectfully believes that all outstanding grounds raised by the Examiner have been addressed, and thus submits the present case is in condition for allowance, the early notification of which is earnestly solicited.

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Respectfully submitted,

By 

Steven R. Greenfield

Registration No.: 38,166

Howison & Arnott LLP

Two Lincoln Center 5420 LBJ Freeway, Suite 660

Dallas, Texas 75240-2318

(972) 680-6058

Attorneys For Applicant